

<p>98-445227/38 B04 D16 MOME= 96.01.17 MOSC MED ACAD *RU 2104535-C1 96.01.17 96RU-101025 (98.02.10) G01N 33/497 Determination of pro-superoxide activity from exhaled air - by incubating with animal tissue in presence of nitro:blue tetrazolium and superoxide dismutase and analysing product(s) spectrophotometrically (Rus) C98-134972 Addnl. Data: KOGAN A KH, GEPPE N A, ZEZEROV E G</p>	<p>B(4-B4H, 4-B4M, 4-L3, 7-D13, 11-C7B1, 12-K4) D(5-A2A, 5-H9) .6</p> <p>The method may be used in medicine (especially pathophysiology and pulmonology) for, e.g. diagnosing or monitoring the treatment of internal organ diseases, and assessing air quality.</p> <p><u>ADVANTAGE</u> The method allows various pathological states to be investigated in the living organism.</p>
<p>Determination of prosuperoxide activity of exhaled air from patients or healthy individuals by investigating its effect on biopsy tissue from an animal, is new.</p> <p>The tissue is incubated with nitroblue tetrazolium (I) and superoxide dismutase (II) in the presence of exhaled air samples from the patient and a healthy individual (control). The product from the reaction between the superoxide anion- radical and (I) (especially formazans) is extracted with an organic solvent, followed by spectrophotometric determination of formazan concentration.</p> <p>Prosuperoxide activity of the exhaled air sample is then calculated from the difference between absorbance readings for the patient and control.</p> <p><u>USE</u></p>	<p><u>EXAMPLE</u> A biopsy sample from a mouse liver (3 mg) was washed, granulated, then incubated for 1 hour with buffer solution (0.3 ml), compound (II) (250 µg in 0.2 ml buffer solution), 3% NADPH (0.1 ml), 0.2% (I) solution (0.2 ml) and exhaled air from a bronchial asthma patient (730 mm Hg).</p> <p>The difference in absorbance readings for this sample (0.196 units) and air from a healthy subject (0.084) represented the prosuperoxide activity of the patient's exhaled air sample. (DB) (4pp2305DwgNo.0/0)</p>

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